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Inaugural Dissertation

on

Hydrothorax.

by

Jeremiah B. Kern,
Member of the Philadelphia Medical Society.—

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The end I have chiefly in view in this essay, is to exhibit the causes, symptoms, and most approved plan of treatment in that species of dropsical effusion denominated Hydrothorax. The thoracic cavity is lined, and the different viscera are enveloped by membranes which in a healthy state secrete a fluid calculated to lubricate the containing viscera; but when from disease the quantity of the fluid is increased, as the absorbent powers of the lymphatics are deficient, an accumulation takes place, and Hydrothorax is established.

The situation of the fluid varies; in some instances it is confined to the pericardium, or membranes covering of the heart; most frequently in one or both cavities of the pleura; in other cases in the cellular texture surrounding the bronchia; and in some rare instances, in all of the above mentioned situations. In addition to these varieties in the location of the fluid,

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The disease is most frequently met with in males, particularly those whose corporeal frame have suffered from the use of spirituous potations; individuals whose constitutions have been prematurely wrecked by debauched habits, persons of this description are frequently seen in the public institutions for the reception of paupers.

Females are also subject to the disease, and especially those who have frequent attacks of peripneumonia notha, Asthma, and other pneumonic affections, in whom it is not unfrequently associated with amenorrhea, and children are least in order of frequency the subjects of its attack.

Remote causes of Hydrothorax. These are very numerous; it not unfrequently exists with anasarca, and is an effect of a general dropsical diathesis; drunkenness is a prolific source of the disease. The improper use of mercury, exposure to cold during salivation, especially when the patient is predisposed to the disease, frequent attacks of misplaced gout, it is often an attend-

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Inflammation acting upon a debilitated system sometimes terminates in an effusion of serum when the antiphlogistic remedies have been sparingly used; hence when inflammation occurs in part contained in the cavity of the chest in debilitated persons, it not unfrequently terminates in an effusion of serum, and thus produces the disease. Exposure to cold is also a remote cause of the complaint, and also those causes producing general dropsy, as viscural obstructions, scarlatina, &c.

Symptoms of Hydrothorax.

These indicate considerable functional derangement in the thoracic viscera; many of which are referable to a compression of the lungs, these however varies from the situation of the effused fluid.

There are however, some symptoms common to several species, which I shall first enumerate, and then proceed to notice the symptoms attendant on the fluid in each

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situation, so that a diagnosis may in most instances be established.

Hydrothorax generally commences with pain and uneasiness at the scrobiculus cordis, and often pain in one or other side of the thorax; a loaded high coloured urine is said by Blackall to be generally one of the first symptoms. There is dyspnoea which is much increased upon motion, and a horizontal position; the patient is troubled with a cough which is dry in the commencement, and as the disease advances it is attendant with expectoration; there is often oedematous extremities, and a leucophlegmatic countenance expressive of much anxiety; the lips are purple, the patient's sleep is much disturbed, often he awakes with palpitation, and a fear of immediate suffocation; the pulse varies considerably; generally it is small, quick and irregular, and sometimes tense; in addition to these symptoms, there is thirst and scarcity of urine: as the disease advances the symptoms are aggravated; a pain and numbness in the arm, extending to the

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insertion of the dorsal muscle. The most distressing symptom is orthopnœa; this term is an inquiry of a disorder, in which respiration can be performed only in an erect posture, so that the patient is obliged to rest at night in a chair.

Many of the above symptoms are not peculiar to aneurisms, but often accompanies other diseases of the chest; and it is a combination of them that affords us evidence of the existence of such a disease. The difficulty in some instances is very great; a pulsation is sometimes perceived by the patient or practitioner; where this is present we can entertain no doubt as to the existence of the affection.

Percussion of the chest as recommended by Corvisart, is sometimes effectual in detecting the presence of blood in the chest; it is also stated by respectable authorities, that the symptoms are aggravated by inclining the abdomen; from the capacity of the thorax being lessened in consequence of the ascent of the diaphragm. The bowels are generally

accompanied with flatulency and costiveness, the appetite is generally impaired.

When the fluid is confined in the cavity of the pericardium, the patient experiences most relief when he is erect, with his body inclined forward, the pulse is more irregular; the patient feels as if his heart were swimming in a fluid, and the palpitation is more frequently observable in this situation than any other.

It is also observed by Corvisart, that patients afflicted with Hydrops pericardii, feel a painful sensation and a dull pain in the region of the heart, a difficulty of breathing in which tumultuous suffocation, when he endeavours a horizontal posture, he often experiences dyspnœa, and more rarely palpitation.

The pulse is small, weak, frequent, concentrated and irregular, he sighing the hand over the region of the heart, tremulous and obscure beat are felt, it may be said that the heart causes its pulsations to be felt through a fluid situated between it and the parietes of

the thorax. When percussion is performed it is obscure; in some cases the left side of the thorax is higher, rounder, and more convex than the right.

When the fluid is deposited in the cellular texture, surrounding the bronchia and air cells, it is designated by the term "Œdema pulmonum, or anasarca pulmonum," and is distinguished by the following signs, for which I am indebted to the readers of Dr. Percival.

"The pulse of respiration is constant, and increased by the least motion though not much varied by the different attitudes of the body, the patient complains of great anxiety about the precordia, and when he attempts to make a deep inspiration he finds it impossible to dilate the chest, and his breath seems to be suddenly stopped, he,

"He is not always much of distinction in the circumstance that dyspnœa is not increased by change of posture; for the water being confined to the substance of the lungs, it continues to keep equally in all positions of the body.

It remains for me to notice the most common,

[illegible] Hydrothorax or that in which the fluid is located, [illegible] in both cavities of the pleura.

In the enumeration enumerated above, I have only to observe, that the fluid is situated in the cavity of the pleura on one side, a corresponding enlargement on that side of the thorax is sometimes observable. When both cavities participate in the disease, it is more frequently associated with general dropsy.

To delineate with accuracy the line of demarcation between the different species of Hydrothorax, is a task of acknowledged difficulty, and of little practical utility; except with a view for the elevation of paracentesis.

The difficulty of ascertaining to a certainty, the existence of water in the chest, in many cases, and particularly in the early stage of the disease, is generally acknowledged, and to obtain a correct diagnosis of this and other diseases of the chest, have been long a desideratum in medical science, and although much attention has been paid to it, it is confessed, that our

[illegible] in accordance to the output of electricity, [illegible]
[illegible] is assumed to the magnetic [illegible] resident to the [illegible] part,
and the operation consists in making [illegible] magnetic,
and the powerful magnetic [illegible] between the [illegible]
[illegible] of the body, [illegible] [illegible] [illegible] [illegible].
Considering this deficiency of electricity induced by a
[illegible] of observations and experiments, it constructed an instru-
ment by which the deficiency is derived, and the presence
of [illegible], wound [illegible] inflammations, and other diseases may
be [illegible] and determined.
The construction of the instrument, and mode of application
to the disease which is the particular object of this
[illegible] is explained.

Treatment of Hydrothorax.

Celsus asserts that Hydrothorax will seldom result
from an alteration. The views which Dr Cullen entertained
of diseases in general, accounts for his success in curing
it to depend on a debilitated state of the system, a plan

Opium was adapted to correct the feebleness.

In referring to the causes of Hydrothorax, it will be observed that many of them are calculated to excite the system. In recent cases, aided by our distinguished people Cabanis, we in addition to Dr. Cullen, and the ample experience and success of his practice, directions and cautions the correctness of his observations.

Hartshall, is also an advocate for the inflammatory nature of dropsy.

In the treatment of this disease, our practice should be regulated by the state of the system, or the causes producing the disease, as it is generally systematic.

Our object should be first to remove the effused fluid, and secondly to alter the state of the system, or remove the causes occasioning the effusion. For the attainment of the first object, paracentesis has been recommended, and occasionally practised from the most ancient period, to the present day. The propriety of drawing off the effused fluid in

this second disease is questioned, certainly no circumstance, but the most urgent symptoms would justify the measure, the danger to be apprehended is inflammation, and a collapse of the lungs.

In some instances from interstitial absorption, the lungs are very much diminished, and upon evacuating the fluid the lungs are unable to perform their functions. it is of very limited application, for when the fluid is situated in the substance of the lungs the operation will not relieve; when situated on the pericardium the operation is inadmissible: although the operation has been performed, the results have been for the most part unfavourable.

The second mode of removing the fluid is by exciting or increasing the action of the lymphatics, and for this purpose diuretics are employed.

The state of the system should be carefully attended to; if any febrile symptoms are present venesection should be resorted to, and topical bleeding by the application of cups to the chest is often necessary; it is a fact mat-

[illegible] treated upon by physicians. Cold [illegible] and as long as the arterial action continues active the absorbent system of the lymphatics are [illegible] restored; after having reduced the system to the necessary standard we should resort to diuretics.

The last of this class is the Scilla maritima or squill, [illegible] vinegar, [illegible], or oxymel. It not only proves diuretic, but it also promotes expectoration; by the former operation it increases the action of the emphasis, and by this operation removes the effusion; by the latter it renders the patient more comfortable. The operation of this medicine is much promoted by a mild mercurial course, and hence a popular practice is to combine these two articles; a salivation is consequently flattering.

Stockhardt, from accurate observations on the urine, in little, has arrived to much respect, states from experience, that the result is much to be depended on when the urine is scanty, high coloured, full of sediment, and without derium.

Its use however is not limited to [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] when the urine is [illegible] coagulable, but in proportion as that complication becomes more marked [illegible] constitutional character inflammation and weak-ness of the digestive organs, it [illegible] [illegible] [illegible] [illegible] [illegible].

The dose of [illegible] [illegible] [illegible] is [illegible] two or three times a day.

[illegible] [illegible] [illegible] with [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] pills [illegible] [illegible] [illegible] [illegible] [illegible]. In [illegible] cases [illegible] [illegible] [illegible] [illegible] be added, [illegible]

[illegible] [illegible] [illegible]
Extract [illegible] [illegible]
[illegible] [illegible]
[illegible] [illegible]

One of which may be taken in the morning, a second at noon and a third in the evening.

In general the remedy will not be continued more than [illegible] dangerous symptoms following, which is incompatible [illegible] immediately.

In addition to these occasional [illegible] constant discharges [illegible] painful, especially when the [illegible] complains of great pain. [illegible] the other [illegible] always [illegible] taken in the dose of [illegible] a drachm [illegible] ordinarily [illegible] and is [illegible] followed by the blue pill. The attendant question [illegible] whether the colchicum is most effectual when it causes vomiting or purging or otherwise?

The question has been much debated between Cullen and Sir Everard Home; the latter [illegible] that the remedy is most effectual when it produced purging. Cullen on the other hand, contended that this operation counteracted the diuretic operation, and consequently proved injurious; subsequent authors have generally agreed in the correctness of Cullen's views.

To compare the natural or odour, Germany is done
power, or that of either may be given to the patient.
The natural sort is inferior as the distillate pur
ness; this was first introduced into regular practice
by Coxe of Philadelphia, and highly extolled in the various
heads of dropsy, and particularly in hydrothorax:
it is regarded the, as has recommended by Pallas, Ray,
Coxe, and other celebrated physicians, as it induced
an idea that it was of value; much of this reputation
has abated, and although very uncertain in its opera
tion it may in some cases prove serviceable.
If Digitalis has been extensively used in the United
States and very doubtful dangers, this has tended to bring
it into disrepute.

The quantity is alle[illegible] the
as of the active in the country, as very and to be varying
in the determined state from exposure to light and air
or other causes impairing the activity of the remedy.
The digitalis is particularly recommended in persons
of a debilitated system, weak pulse, cold surface, and

[illegible] complicated with general dropsy. It is [illegible] most successful in dropsy, [illegible] in [illegible] hands, and [illegible] [illegible] with anodynes.

Digitalis [illegible] when the urine is turbid, and deposits a thick sediment, and particularly capsules that even if dropsy follows, diuresis [illegible] when the discharge is high coloured and deposits a sediment [illegible] tests. Blackall.

It is correct as a circumstance that we cannot [illegible] be highly.

Where the system is excited, a strong pulse and other symptoms of febrile action, the use of the digitalis is precluded.

There are prescriptions in which digitalis is commonly employed, viz. in [illegible], infusion, [illegible] and Brown's calcinated tincture.

The dose of the article in substance is from one to three grains twice a day; of the infusion, as required.

[illegible] nothing [illegible] [illegible] [illegible]

the operation of a much substituted [illegible] has been experienced during that time. The [illegible] [illegible] has been [illegible] with success, in [illegible] of [illegible] [illegible] [illegible] practice is detailed in the medical [illegible] [illegible] and [illegible] [illegible].

The carbonate of potash, as [illegible] [illegible] when the stomach is much [illegible], is recommended by Steinele to assist its operation by his [illegible] bitters.

Passing to another method, [illegible] to [illegible] the action of the [illegible] [illegible], but [illegible] [illegible] method is said to be inadmissible.

How far [illegible] would succeed, if an [illegible] [illegible] [illegible] extensively; that they stimulate the [illegible] system into increased action, [illegible] been sufficiently proven.

[illegible] should be kept [illegible] [illegible] and [illegible]. The diet should be regulated by the state of the system, the patient should not eat

a great quantity at a meal, the food should be light and easy of digestion.

Whether I have succeeded in accomplishing what I anxiously anticipated remains for you to determine; but, rest assured, honoured professors, that whatever your decision may be, I have in every instance been actuated by just and honourable motives. —

Errata

p 3, varies for vary

4. attendant for attendet.

" ademitsen

5 Existencies for existence

" Drapheam for Drapheaphm

6 Periches p 8. Demarkation p 11. Collapse for collapse

13 Scilla for Scilla 14. Respirations 15. pumpuria

16. 15 Darwin's Darwin. unsuccess.

17 18. Ferrin for Ferrier